IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-2 (Canceled).

Claim 3 (Currently Amended): ~~A~~ The mechanism simulation method according to claim 17, ~~wherein~~ further comprising:

~~the state transition model inputs~~

inputting, by a state transition model, a control signal from an external mechanism control software system.

Claim 4 (Currently Amended): ~~A~~ The mechanism simulation method according to claim 17, wherein the mechanism elements include a rotation angle or displacement of an actuator.

Claims 5-7 (Canceled).

Claim 8 (Currently Amended): ~~A~~ The mechanism simulation method according to claim 17, further comprising storing the generated table to a file.

Claim 9 (Currently Amended): ~~A computer readable medium storing a computer program for performing a mechanism simulation using both a hybrid simulation and a kinematic simulation, wherein in the hybrid simulation, a behavior of a mechanism is simulated using a hybrid model including a continuous system model and a state transition~~

~~model, the hybrid model including a continuous system equation having a plurality of variables, and in the kinematic simulation, a geometrical operation of the mechanism is simulated using a three-dimensional mechanism model including a plurality of mechanism elements, the program when executed by a computer results in performing steps comprising:~~

~~reading data representing the variables of the hybrid model described in a hybrid model language;~~

~~reading data representing the mechanism elements of the three-dimensional mechanism model;~~

~~extracting, from the data representing the variables, a plurality of selective variables each of which enables to be associated with any one of the mechanism elements;~~

~~extracting, from the data representing the mechanism elements, a plurality of selective mechanism elements each of which enables to be associated with any one of the variables;~~

~~receiving a selection which is made by a user and is indicative of a combination of one of the plurality of selective variables and one of the plurality of selective mechanism elements, to generate a table that represents a correspondence between the variables and the mechanism elements based on the selection, wherein the one of the plurality of selective variables in the combination is selected by selecting a class of predefined hybrid model to which the selective variables belong, and selecting a member variable in the class;~~

~~calculating a value of one of the variables of the continuous system equation by a first simulator that executes the hybrid simulation;~~

~~identifying a mechanism element corresponding to a variable having the calculated value, referring to the table;~~

~~transmitting, to a second simulator, information specifying the identified mechanism element and the calculated value of the variable; and~~

~~executing the kinematic simulation by the second simulator based on the information.~~

A computer readable storage medium storing a computer program configured to cause a computer to execute a method for simulating a mechanism, said method comprising:

reading data representing a plurality of variables of a continuous system equation of a hybrid model described in a hybrid model programming language having a class definition functionality based on an object-oriented approach;

reading data representing a plurality of mechanism elements of a three-dimensional mechanism model;

extracting, from the data representing the variables, a plurality of selective variables each of which enables to be associated with any one of the mechanism elements;

extracting, from the data representing the mechanism elements, a plurality of selective mechanism elements each of which enables to be associated with any one of the variables;

receiving a selection which is made by a user and is indicative of a combination of one of the plurality of selective variables and one of the plurality of selective mechanism elements, to generate a table that represents a correspondence between the variables and the mechanism elements based on the selection, wherein the one of the plurality of selective variables in the combination is selected by selecting a class of predefined hybrid model to which the selective variables belong, and selecting a member variable in the class;

calculating a value of one of the variables of the continuous system equation by a first simulator that executes the hybrid simulation in which a behavior of the mechanism is simulated;

identifying a mechanism element corresponding to a variable having the calculated value, referring to the table;

transmitting, to a second simulator, information specifying the identified mechanism element and the calculated value of the variable; and

executing a kinematic simulation by the second simulator based on the information in which a geometrical operation of the mechanism is simulated.

Claim 10 (Canceled).

Claim 11 (Currently Amended): ~~A computer readable medium~~ The method according to claim 9, ~~wherein the state transition model inputs~~ further comprising:

inputting, from a state transition model, a control signal from an external mechanism control software system.

Claim 12 (Currently Amended): ~~A computer readable medium~~ The method according to claim 9, wherein the mechanism elements include a rotation angle or displacement of an actuator.

Claim 13 (Canceled).

Claim 14 (Canceled).

Claim 15 (Canceled).

Claim 16 (Currently Amended): ~~A~~ The computer readable medium according to claim 9, further comprising instructing the computer to store the generated table to a file.

Claim 17 (Currently Amended): ~~A mechanism simulation method of performing a mechanism simulation using both a hybrid simulation and a kinematic simulation, wherein in~~

~~the hybrid simulation, a behavior of a mechanism is simulated using a hybrid model including a continuous system model and a state transition model, and in the kinematic simulation, a geometrical operation of the mechanism is simulated using a three-dimensional mechanism model including a plurality of mechanism elements, the hybrid model including a continuous system equation having a plurality of variables, the method~~

A method of simulating a mechanism, comprising:

reading data representing ~~the~~ a plurality of variables of ~~the~~ a continuous system equation of a hybrid model described in a hybrid model programming language having a class definition functionality based on an object-oriented approach;

reading data representing ~~the~~ a plurality of mechanism elements of ~~the~~ a three-dimensional mechanism model;

extracting, from the data representing the variables, a plurality of selective variables each of which enables to be associated with any one of the mechanism elements;

extracting, from the data representing the mechanism elements, a plurality of selective mechanism elements each of which enables to be associated with any one of the variables;

receiving a selection which is made by a user and is indicative of a combination of one of the plurality of selective variables and one of the plurality of selective mechanism elements, to generate a table that represents a correspondence between the variables and the mechanism elements based on the selection, wherein the one of the plurality of selective variables in the combination is selected by selecting a class of predefined hybrid model to which the selective variables belong, and selecting a member variable in the class;

calculating a value of one of the variables of the continuous system equation by a first simulator that executes the hybrid simulation in which a behavior of the mechanism is simulated;

identifying a mechanism element corresponding to a variable having the calculated value, referring to the table;

transmitting, to a second simulator, information specifying the identified mechanism element and the calculated value of the variable; and

executing ~~the~~ a kinematic simulation by the second simulator based on the information in which a geometrical operation of the mechanism is simulated.

Claim 18 (Canceled).